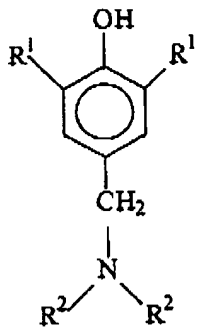
Claims:

1. (Currently amended) A stabilized syndiotactic 1,2-polybutadiene composition comprising:

a syndiotactic 1,2-polybutadiene; ~~and~~

less than about 1.0 mmol of a transition metal per 100 parts by weight syndiotactic 1,2-polybutadiene; and

at least about 1.4 parts by weight per 100 parts by weight syndiotactic 1,2-polybutadiene of an antioxidant ~~defined by the formula~~ selected from the group consisting of 2,6-di-t-butyl-4-(dimethylaminomethyl)phenol, 2,6-di-t-butyl-4-(diethylaminomethyl)phenol, 2,6-diethyl-4-(dimethylaminomethyl)phenol, and 2,6-dimethyl-4-(dimethylaminomethyl)phenol



~~where each R^1 and R^2, which may be the same or different, are mono-valent organic groups, or where each R^1, which may be the same or different, is a mono-valent organic group and the two R^2 groups join to form a divalent organic group~~.

2-4 cancelled

5. (Original) The composition of claim 4, where said antioxidant is 2,6-di-*t*-butyl-4-(dimethylaminomethyl)phenol.

6-22 cancelled

23. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 1, where the composition comprises at least about 2 parts by weight of said antioxidant per 100 parts by weight syndiotactic 1,2-polybutadiene.

24. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 1, where the composition comprises at least about 3 parts by weight of said antioxidant per 100 parts by weight syndiotactic 1,2-polybutadiene.

25. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 1, where said syndiotactic 1,2-polybutadiene and said transition metal derive from polymerizing conjugated diene monomer by employing an iron-containing, chromium-containing, or molybdenum-containing catalyst system, where the amount of the iron-containing, chromium-containing, or molybdenum-containing compound employed is from about 0.01 to about 1.0 mmol of iron-containing compound, chromium-containing compound, or molybdenum-containing compound per 100 g of monomer to form syndiotactic 1,2-polybutadiene.

26. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 1, where the composition comprises from about 0.01 to about 1.0 mmol of transition metal per 100 parts by weight of said syndiotactic 1,2-polybutadiene.

27. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 26, where the composition comprises from about 0.01 to about 0.5 mmol of transition metal per 100 parts by weight of said syndiotactic 1,2-polybutadiene.

28. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 1, where the composition comprises from about 1.4 to about 10 parts by weight of said antioxidant per 100 parts by weight of said syndiotactic 1,2-polybutadiene.

29. (New) A stabilized syndiotactic 1,2-polybutadiene composition comprising:

syndiotactic 1,2-polybutadiene:

less than about 0.5 mmol of a transition metal per 100 parts by weight syndiotactic 1,2-polybutadiene; and

at least about 0.7 parts by weight per 100 parts by weight syndiotactic 1,2-polybutadiene of an antioxidant selected from the group consisting of 2,6-di-t-butyl-4-(dimethylaminomethyl)phenol, 2,6-di-t-butyl-4-(diethylaminomethyl)phenol, 2,6-diethyl-4-(dimethylaminomethyl)phenol, and 2,6-dimethyl-4-(dimethylaminomethyl)phenol

30. (New) The composition of claim 28, where said antioxidant is 2,6-di-*t*-butyl-4-(dimethylaminomethyl)phenol.

31. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 29, where the composition comprises at least about 1 parts by weight of said antioxidant per 100 parts by weight syndiotactic 1,2-polybutadiene.

32. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 29, where the composition comprises at least about 2 parts by weight of said antioxidant per 100 parts by weight syndiotactic 1,2-polybutadiene.

33. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 29, where said syndiotactic 1,2-polybutadiene and said transition metal derive from polymerizing conjugated diene monomer by employing an iron-containing, chromium-containing, or molybdenum-containing catalyst system, where the amount of the iron-containing, chromium-containing, or molybdenum-containing compound employed is from about 0.01 to about 0.5 mmol of iron-containing compound, chromium-containing compound, or molybdenum-containing compound per 100 g of monomer to form syndiotactic 1,2-polybutadiene.

34. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 29, where the composition comprises from about 0.01 to about 1.0 mmol of transition metal per 100 parts by weight of said syndiotactic 1,2-polybutadiene.

35. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 34, where the composition comprises from about 0.01 to about 0.1 mmol of transition metal per 100 parts by weight of said syndiotactic 1,2-polybutadiene.

36. (New) The stabilized syndiotactic 1,2-polybutadiene composition of claim 29, where the composition comprises from about 1 to about 10 parts by weight of said antioxidant per 100 parts by weight of said syndiotactic 1,2-polybutadiene.